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AUTHOR Hopkins, John E.
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ABSTRACT

This paper discusses the problem of selecting appropriate minimum criteria for the review of educational programs and products that will not unduly hinder the creative freedom of educational developers. The author first asserts that although most people support the concept of examining and assessing educational products and programs, there is much disagreement over pertinent criteria. Although it is possible to develop a matrix of criteria for the evaluation of each product, the author suggests, the question of which criteria should be applied to all products should be based on the free enterprise model. That is, criteria should be applied that assure the harmlessness of a product, but beyond that point the market place should be allowed to work its will free of further requirements. Specifically, the only criteria that should be applied to the assessment of any new educational product before its release, the author argues, are the criteria of "social balance and fairness" and "user effects." (Author/JG)

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Annual Meeting Presentation

American Educational Research Association

San Francisco, April 21, 1976

Symposium: Can We Agree on Some Common Criteria for the Review of the Quality of Educational Products and Programs

Individual Presentation: Criteria Acceptable to the Educational Developer

John E. Hopkins
Director of Planning and Evaluation
Research for Better Schools, Inc.
1700 Market Street, Suite 1700
Philadelphia, Pennsylvania 19103
AC 215-561-4100 Ext. 272

EA 008 482

Let me begin the individual presentations by discussing the criteria acceptable to the educational developer -- the producer of these things we are so concerned about.

When I think of the educational developer's role in this matter, I get a mental image of the developer, like Atlas of ancient mythology, trying to balance the bulk of a huge inverted pyramid of legislation, criteria, and expectations, while simultaneously striving to be imaginative, daring, efficient, and effective in creating a solution to an educational problem. If you develop a similar image as you listen to the presentations which follow, then, perhaps, you will understand why I expect to be the defensive one on the panel today.

Since ten minutes is not very much time, let me just assert a couple of things at the outset.

1. I endorse completely the concept of examining and assessing educational products and programs on a wide variety of bases, but I believe that until we have greater understanding of the consequences of employing these criteria, any effort to require any large number of them would be a huge error. I'm afraid that such a move would signal the end of the very kind of careful, thorough development most of us are trying to encourage, because it would make that type of development much too expensive and too time-consuming.

2. I support the efforts currently being made to compile lists of criteria appropriate for use in reviewing educational products and programs. If we are ever going to deal with the creature, we must first know its dimensions and characteristics. But I

do want to stress that we are still a long way from consensus on what constitutes a comprehensive and accurate list of the pertinent criteria, let alone consensus on which of them are of greater importance than others. It is still very early in this particular ball game and anything can happen.

To illustrate the point, I have made available copies of a list being generated by Alan Coller of Research for Better Schools. Let me point out two things. First, there are differences in the way Alan Coller has classified certain criteria and the way Sue Klein has classified apparently the same criteria. This is not to suggest that one is right and the other wrong, but to illustrate that we aren't in agreement on how to classify review criteria, let alone how to interpret, rank order, or apply them.

Second, you will note that the Coller list is incomplete in two respects. Alan has taken just the first category (Adoptability) and carried it to greater levels of detail. That task still remains to be done on the remaining five categories (Intrinsic Quality, Desirability, etc.). Note for yourselves the large number of criteria he has identified already (68 by my count) and he hasn't yet finished the list! This illustrates for me, at least, that the practical problems of applying criteria in the review of educational products and programs are too many, and too great, to be imposed to any great extent on the educational developer now.

The other way in which the Coller list is incomplete is that each of the individual listings still must be backed up with

definitions which are mutually exclusive but, in toto, all-encompassing, with standards for judging each, and, if they are to be of practical benefit, with evaluation questions appropriate to be asked under each of them. I think this, too, indicates how very far away we are from that point where we can have some confidence in making recommendations with regard to the criteria appropriate for use in reviewing educational materials and programs and how risky it would be to settle in on a particular set of requirements now.

With that as my attempt to illustrate the magnitude of the problems involved in the review of educational products and programs, let me move on and devote the remainder of my time to the matter of which criteria I believe would be at least temporarily acceptable to the educational developer. As I do so, I will use Sue Klein's classification, rather than Alan Coller's, so we will have a common base for discussion.

Deciding which of the many possible criteria to include and exclude from a minimally acceptable set is a difficult task, as I'm sure my associates on the panel will agree. That's because the decisions are largely idiosyncratic to each product and program. Whether or not "social acceptance" is an important criterion depends on whether you're examining a classroom curriculum product or a self-help training manual for administrators.

On a per-product basis, I would use a criterion matrix to help identify the criteria most appropriate for use. I would list in the left column the full range of criteria which had been identified. As the column heads across the top of the matrix I would list (1) target population, (2) type of

product, (3) sponsor' expectations, (4) purpose of the developmental effort, (5) legislative mandates, etc. Appropriate rankings could be made in such a matrix for each product being considered for review.

In looking at the question of which criteria ought to be applied as a minimum to all products, I follow the free enterprise model. That is, I believe developers can reasonably be required to meet criteria which assure the harmlessness of the product on potential users, but that from that point on there should be no further requirements and the market place should simply be allowed to work its will. Stated another way, I believe that government, distributors, and developers themselves have a responsibility to guard the public from harm, and should actively seek to meet that responsibility by establishing prudential criteria and standards, but that the dangers of proceeding beyond that point are greater than the protections which would be obtained. In my view, these dangers would take the form of undue government influence, censorship, a reduction in available alternatives, and possibly the cessation of large segments of the development industry under the burden of a moutain of regulation and legislation.

If you will look with me at the column heads on Sue Klein's questionnaire, I will indicate what I think are the implications of application of the free enterprise model to the various criteria which appear there.

The first column, labeled "Desirability," contains criteria most appropriate to the pre-development, or needs assessment, phase of a developmental effort. Such matters as the need for the product, demand for the product, and so forth are appropriate for discussion at that point between the potential sponsor and potential developer, but, in my opinion, are not pertinent to the question of whether a completed program

or product can or ought to be released for general use. I would not include any of these criteria among the minimum set to be required for release of a product or program.

The criteria in the second column, under the heading "Practicability," seem to me to apply to the marketability of the finished program or product. These are important considerations, all right, but whether or not there is an assured market for a program or product is, I submit, not crucial to whether they ought to be made available to the marketplace, and I would not include these criteria among the minimum set.

Moving for a moment to the extreme right hand column ("Spinoffs"), I regard the effects listed there (model for other work, contributes to knowledge) as bonus effects which might be obtainable from programs or products specifically designed to be "models," or to test a set of developmental hypotheses, but not pertinent to all programs or products and, therefore, not among the minimum set of criteria which ought to be applied for a program or product to be released.

Some, but not all of the criteria in columns three, four, and five do seem to me to be relevant to the matter under examination. In column three, Sue has included "technical quality of physical features of materials" and "attractiveness (of materials)" under the heading "Intrinsic Quality." I would have listed these in the second column, and, as I have already indicated, I consider these marketability criteria not applicable to the release or not release decision.

The other criteria in column three include one I <u>would</u> include among the minimum set: the criterion of social balance or fairness. More will be said about this in a few minutes.

The remaining criteria in column three are "content accuracy and currency" and "instructional quality, coherence of design, clarity, (and) clear purpose." These seem to me to be matters of prudential concern to the sponsor of the product, and ones which most would hope would be of concern to curriculum selection committees. I submit they ought not be legislated as being among any required minimum set, however, because of (1) the lack of general agreement on content (e.g., the differing theories on the creation, the Great Books versus "relevance" schools of thought), (2) our inability to substantiate empirically the virtues of various instructional designs, and (3) the wide variations in purpose which exist throughout the country.

I would exclude the criteria in the forth column, labeled "Product Development," because they have to do with technical aspects of the process and not the outcome. Some may believe that particular developmental methods or certain staff credentials have a strong bearing on the quality of the program or product which is produced. But there is no evidence to support such a belief, so procedural requirements ought not be included among any minimum set of required criteria.*

Finally, in the column labeled "User Effects," is the major criterion I would endorse as appropriate to apply to any new program or product before its release.** Evidence on the effects of the new development--primary and secondary, anticipated and unanticipated, cognitive and affective, physical

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*"Learner verification," which is included in column four, is a process for product improvement after its release, so I have excluded it from this discussion of release criteria.

**The other criterion in column five, credibility of evidence, is part and parcel of the evidence, in my view, and therefore not distinguishable as a separate criterion. Would anyone give credit for a categorical requirement having been met if the evidence offered were incredible?

and psychological -- is a fair minimum requirement. To pick up on an earlier comment, I would include evidence on social balance, or fairness as another one of the acceptable minimum requirements. I see this as actually being one of the types of "user effects," because its impact is primarily as a psychological effect, but I concede that the topic now has gained enough political overtones that it is not unreasonable to consider it (social balance) as a criterion apart from its effects on users.

These are the minimum criteria, and the only criteria, then, which I see as being legitimately required of developers at the present time. Other criteria may be required by sponsors or implicit in the development effort itself, on a product by product basis, but to go beyond the application of user effects criteria on a universal basis is, in my opinion, risky, not sensible, and a danger to the continued existence of a large segment of the development industry as we now know it.

Preliminary Statement: Categories of Criteria Which May be Used in Evaluating Change Process Activities or Functions (Including Products)

1.0.0.0.0. Adoptability..

1.1.0.0.0. Acceptability.
1.1.1.0.0. Balance.
1.1.2.0.0. Compatibility.
1.1.3.0.0. Legality.
1.1.4.0.0. Legitimacy.
1.1.5.0.0. Pertinence.

1.2.0.0.0. Exportability.
1.2.1.0.0. Integrity.
1.2.1.1.0. Completeness.
1.2.1.2.0. Unity.
1.2.2.0.0. Independency.
1.2.3.0.0. Conveyability.
1.2.4.0.0. Availability of Invention.
1.2.5.0.0. Availability of Services.
1.2.6.0.0. Trainability.

1.3.0.0.0. Feasibility.
1.3.1.0.0. Reasonableness of Costs.
1.3.1.1.0. Economical Soundness.
1.3.1.2.0. Cost Competiveness.
1.3.2.0.0. Affordability.
1.3.3.0.0. Implementability.
1.3.3.1.0. Resource Availability.
1.3.3.2.0. Resource Recommendations.
1.3.3.3.0. Resource Requirements.

1.4.0.0.0. Flexibility.
1.4.1.0.0. Adaptability.
1.4.2.0.0. Diversity.

1.5.0.0.0. Manageability.
1.5.1.0.0. Operability
1.5.2.0.0. Integrativeness.
1.5.3.0.0. Maintainability.
1.5.3.1.0. Durability.
1.5.3.1.1. Continuance.
1.5.3.1.2. Sturdiness.
1.5.3.1.3. Perpetuality.
1.5.3.2.0. Utility.
1.5.3.3.0. Correctiveness.

2.0.0.0.0. Intrinsic Quality.

2.1.0.0.0. Appeal.

2.2.0.0.0. Contentual Accuracy.
2.2.1.0.0. Currency.
2.2.2.0.0. Correctness.
2.2.3.0.0. Sufficiency.

2.3.0.0.0. Harmlessness.

2.4.0.0.0. Instructional Quality

2.5.0.0.0. Social Fairness

2.6.0.0.0. Technical Quality.

2.7.0.0.0. Uniqueness.

2.8.0.0.0. Product Development Process Adequacy.

Developed by Alan R. Coller
Evaluation Specialist
Research for Better Schools, Inc.
February, 1976

3.0.0.0.0. Desirability.

3.1.0.0.0. Significance.
3.1.1.0.0. Problem-Simple Impact.
3.1.2.0.0. Intensity.

3.2.0.0.0. Relevance.
3.2.1.0.0. Centrality.
3.2.2.0.0. Scope.

3.3.0.0.0. Timeliness.

3.4.0.0.0. Marketability.
3.4.1.0.0. Adiance.
3.4.2.0.0. Competitiveness.

3.5.0.0.0. Simple Impact.

3.6.0.0.0. Compatibility.

4.0.0.0.0. Effectiveness.

4.1.0.0.0. Nature of Effects.
4.1.1.0.0. Sum of Effects.
4.1.2.0.0. Quality of Effects.

4.2.0.0.0. Potency of Effect(s).
4.2.1.0.0. Outputs/Effectiveness.
4.2.1.1.0. Magnitude of Effect(s).
4.2.1.2.0. Magnitude of Anticipated Effects.
4.2.1.3.0. Magnitude of Desired Effects.
4.2.2.0.0. Duration of Effect(s).
4.2.3.0.0. Meaningfulness of Effect(s).

4.3.0.0.0. Cost/Effectiveness.
4.3.1.0.0. Magnitude of Effects.
4.3.2.0.0. Real Costs.

4.4.0.0.0. Interactive Effects.

5.0.0.0.0. Impact.

5.1.0.0.0. Range of Effects.
5.1.1.0.0. Extent of Effects.
5.1.2.0.0. Spread of Effects.

5.2.0.0.0. Cumulative Impact Effects.
5.2.1.0.0. Multiplicative Impact Effects.
5.2.2.0.0. Transactional Impact Effects.

5.3.0.0.0. Simple Impact/Effectiveness.
5.3.1.0.0. Simple Impact (See Desirability).
5.3.2.0.0. Problem-Simple Impact (See Desirability).

6.0.0.0.0. Efficiency.

6.1.0.0.0. Cost/Efficiency.
6.1.1.0.0. Continuance.
6.1.2.0.0. Real Costs

6.2.0.0.0. Process/Efficiency.
6.2.1.0.0. Real Time.
6.2.2.0.0. Time Requirements.

6.3.0.0.0. Resource/Efficiency.
6.3.1.0.0. Real Resources.
6.3.2.0.0. Resource Requirements.

Name (Optional) _____ Position _____ Affiliation _____

WHAT DO YOU CONSIDER MINIMUM CRITERIA FOR EDUCATIONAL PRODUCTS?

DIRECTIONS: In the far left column, please circle your major education product decision maker role(s). Then indicate your rating of minimum criteria in the adjoining row(s) by marking: +, for essential criteria; o, for desirable criteria, and -, for unimportant criteria. Circle key items within these criteria clusters. At bottom of the page check (✓) any clusters where you think it is possible to establish common minimum criteria.

PRODUCT DECISION MAKERS' CRITERIA CHART

CRITERIA CLUSTERS

PRODUCT DECISION MAKER ROLE(s)	Desirability	Practicality	Intrinsic Quality	Product Development	User Effects	Spinoffs
	o need o appropriate for intended users o adherance to social, moral, & instructional values o demand	o adaptability o ease of use o reasonable fiscal & psychic costs, o availability & acceptability to users o ability to receive any needed training to use product	o sex, race, ethnic, age, socio-economic fairness or balance o content accuracy & currency o uniqueness o instructional quality clear purpose, rationale o technical quality of physical features of materials o Appeal to learners	o learner verification and revision o quality design o expert staff	o Cognitive skill, performance, attitude, motivation learning rate, attendance, impact on others o credibility of evidence supporting claimed effects	o model for other work o contributes to knowledge
Product Development						
o developer						
o publisher						
o fiscal sponsor						
Product Screening-Consumer Protector, Disseminator						
o federal education agency						
o state education agency						
o intermediate service agency						
o local education agency						
o expert organization - Higher Education, R&D organization, etc.						
o organization for education personnel users - NEA, AFT, AASA, etc.						
o organization for consumers - including non-educational practitioners - EPIE, citizens, PTA, NAM, Council on Interracial Banks, etc.						
Product Selecting by the Consumer User						
o administrator						
o teacher						
o student						
CHECK CLUSTERS WHERE IT MAY BE POSSIBLE TO ESTABLISH MINIMUM COMMON CRITERIA						